Attorney Docket No. 2003P00537WOUS

UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Ilias Manettas et al.
Application Number:	10/551,339
Filing Date:	09/14/2006
Group Art Unit:	3744
Examiner:	Alexis K. Cox
Title:	REFRIGERATION DEVICE WITH ADAPTIVE AUTOMATIC DEFROSTING AND CORRESPONDING DEFROSTING METHOD

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REPLY BRIEF

This is a reply to the Examiner's Answer mailed September 16, 2010.

In the "Response to Argument" section in the Examiner's Answer, the Examiner acknowledges that the temperature sensors in Tilmanis do not constitute a measurement of air flow. The Examiner distinguishes this shortcoming in Tilmanis from the claimed invention by referencing the language in the claims, which define "a measuring device arranged in said air passage to provide a measured signal *representative of air flow through said air passage*." The Examiner concludes that the measurement device in Tilmanis "need not actually measure the air flow itself in order to provide a signal representative of air flow." The Examiner's statement, however, considers this feature in the claims in isolation without regard to the remainder of the claim language. After defining the measuring device that provides a measured signal representative of air flow through the air passage, the claim recites that the control circuit is coupled to the measuring device and receives the measured signal, "said

control circuit activating said heating device when the air flow falls below a predetermined threshold value." This feature of the invention directly contrasts the Examiner's conclusion. In order to determine whether the air flow falls below a threshold value, some level of air flow determination is required, which according to the claim, is referenced by the control circuit based on the measured signal.

Moreover, an anticipating reference must describe the patented subject matter with sufficient clarity and detail to establish that the subject matter existed and that its existence was recognized by persons of ordinary skill in the field of the invention. *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 48 USPQ2d 1321, 1328 (Fed. Cir. 1998). As discussed previously, since the Tilmanis structure monitors temperatures to determine whether a defrost operation should be initiated, Tilmanis does not in any manner describe the patented subject matter . . . "to establish that the subject matter existed and that its existence was recognized by persons of ordinary skill in the field of the invention." Indeed, nowhere does Tilmanis disclose that the thermistors 36, 38 provide a signal representative of air flow through the air passage, nor does Tilmanis provide a control circuit that activates a heating device when the air flow falls below a predetermined threshold value.

The Examiner's reference to the basic equation for heat transfer does not correct these deficiencies. Heat transfer is the movement of heat from one place to another. Heat transfer occurs as a heated body and its surroundings (or vice versa) change temperatures toward a thermal equilibrium. As would be readily apparent to those of ordinary skill in the art, heat transfer is not equivalent to air flow. Moreover, a different equation is applicable in the presence of a source of heating (or cooling) in the claimed refrigeration device. Regardless of the basic equation for heat transfer, Tilmanis lacks any reference to air flow through the air passage and any reference to a control circuit activating a heating device when the air flow falls below a predetermined threshold value.

On page 11 of the Examiner's Answer, the Examiner for the first time distinguishes between use of the term "in" in the claims as compared to the phrase "completely in." Appellants' arguments in this regard were not presented for the first time in the Appeal Brief.

Without conceding the Examiner's contentions, Appellants submit that the intended claim scope would be apparent to those of ordinary skill in the art, particularly in light of the file history of this application. Notwithstanding, if the language proposed by the Examiner is acceptable to place the application in condition for allowance, the Examiner is authorized to amend the claims as proposed by Examiner's Amendment. Notwithstanding, as discussed in the Appeal Brief, the second thermistor 38 in Tilmanis is positioned in the food storage chamber 12.

With reference to claim 20, the Examiner distinguishes a "physical" step from a "method" step. According to the Examiner, this distinction "alone renders the argument unpersuasive." Claim 20 is a method claim that defines physical/active method steps that, in order to be met by an anticipatory reference under 35 U.S.C. §102, must be disclosed in the cited Tilmanis patent. As discussed previously, nowhere does Tilmanis even remotely disclose a step of estimating an air flow through an air passage. Tilmanis rather discloses the use of thermistors 36, 38 to measure a difference in the temperatures between the evaporator coil and the storage space. The Examiner further contends that "the correlation between air flow and temperature difference causes the calculation of the temperature difference to comprise the estimation of the air flow." As noted, however, no such air flow is estimated in Tilmanis, and Tilmanis has no need to perform the claimed estimating step.

With regard to claims 13 and 21, the Examiner contends that the claims only require air flow through an air duct to close a switch. To the contrary, claim 13 recites that the measuring device includes an elastic element which can be deflected from a rest position by said air flow in said passage and a sensor to record the deflection of said element indicative of air flow speed . . . . No part of the Berrett structure provides a signal that is indicative of air flow speed. The Examiner's statement that "an indication of whether air flow speed is above or below a given quantity is still an indication of air flow speed" is incorrect. Such an indication is what it is, merely indicative of whether it exceeds a specified quantity. The system is unable to determine an air flow speed from such a sensor but rather merely an "on" or "off" determination above or below a specified quantity.

With regard to substituting the Howland and Berrett sensors for the temperature sensors of Tilmanis, as discussed previously, such a substitution is not suggested if it would subvert the intended functionality of the primary reference (Tilmanis). Even under the Supreme Court's *KSR* standard, a combination of known elements would not have been obvious unless an ordinarily skilled artisan would have recognized an apparent reason to combine those elements. See, e.g., *Ecolab, Inc. v. FMC Corp.*, 569 F.3d 1335 (Fed. Cir. 2009). Since the proposed modification would render the Tilmanis structure inoperative for its intended purpose, Appellants submit that an ordinarily skilled artisan would not have recognized a reason to combine the elements as proposed by the Examiner.

For at least these reasons and those discussed in the Appeal Brief, Appellants request reversal of the rejections and allowance of the subject application.

Respectfully submitted,

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